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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,883

08/06/2003

Robert Right

87319.4340

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12/14/2005

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EXAMINER

BLOUNT, ERIC

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. JK	Applicant(s)	
	10/634,883	RIGHT ET AL.	
	Examiner	Art Unit	
	Eric M. Blount	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/21/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 1 is objected to because of the following informalities: The word "senor" in line 5 should be "sensor". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 8, 10-11, 12, 16, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adelman et al [U.S. Patent No. 5,451,929] in view of Thompson [U.S. Patent No. 6,543,282].

Regarding **claims 1, 2, 16, and 21**, Adelman discloses a device for detecting an ambient condition comprising a first sensor to determine the presence of a condition, and provide an alarm signal; a filter (12) disposed proximate to the first sensor such that airflow passes through the filter before reaching the first sensor, wherein the filter is configured to prevent a particulate located in the airflow from reaching the first sensor

(column 5, lines 1-16); an airflow monitor that is configured to detect changes in the airflow resulting from the particulate collecting in the filter and monitors airflow level and provides an airflow signal (column 2, lines 39-45 and 52 – 65); and a processor that provides a status message indicative of the state of the alarm signal and the airflow signal (column 2, line 65 – column 3, line 2). Adelman discloses that the smoke detector and the airflow monitor are both capable of providing signals to an alarm generator and different alarms are generated in response to the two conditions. The resulting alarm is a status message indicative of the state of each of the signals. It is obvious that processing is used to discriminate between the signals received at the alarm generator and to make a decision as to which alarm should be generated. Further, processing means are provided for calculating reference values for the detectors (column 3, lines 3-8). While Adelman teaches detecting airflow upstream and downstream of a filter and detector (pressure differential), the invention does not specifically disclose an airflow monitor comprising a first and second element, one being shielded from airflow.

In an analogous art, Thompson discloses an airflow monitor comprising a first element exposed to an airflow and a second element shielded from the airflow. Thompson teaches that both of the elements are heated (column 3, lines 36-45 and column 4, lines 36-40) and the second element is hidden from airflow. The first element is configured for determining an airflow condition and the second element is configured to determine a change in an expected temperature. The airflow monitor is configured to provide an airflow signal (column 3, lines 37-67). Both the instant application and the

Thompson reference are concerned with a differential value between the first and second elements. The differential value is a value indicative of airflow upstream and downstream of a filter. One of ordinary skill in the art would have recognized that the first and second element could yield similar results whether a condition were determined in a heated environment or an ambient environment. This limitation can be viewed as a matter of design.

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to modify the device taught by Adelman with the airflow monitor taught by Thompson because the modification would result in a device that could provide a more efficient airflow monitor using well known thermistor elements. Further, it would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the invention of Adelman to include any effective airflow monitor known in the art.

As for **claim 8**, Adelman discloses that the first sensor may be a carbon monoxide gas sensor (column 2, lines 39-45).

Regarding **claim 10**, Thompson teaches the use of thermistors for measuring airflow. The airflow is determine based on the difference in temperature between the first and second element. (column 6, lines 23-41). Thompson teaches that the airflow signal is a difference in voltage, which is indicative of the difference in temperature between the two elements. It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant that the airflow signal could have been either a difference in temperature or voltage.

Regarding **claim 11**, a processor compares the monitored airflow level to a low airflow threshold and provides an alarm signal indicative of a low airflow level when the monitored airflow level is lower than the threshold (column 3, lines 3-18).

As for **claim 12**, Adelman discloses an embodiment wherein the low airflow threshold may be adjusted (column 7, lines 60-67).

As for **claim 22**, the ambient condition is a smoke condition (column 2).

5. Claims 4-7, 13, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adelman et al in view of Thompson as applied to the claim 1 and 16 above.

As for **claims 4-7 and 17-18**, Adelman discloses that any sensor capable of detecting gas or a particulate within the airflow of a system is suitable for the device (column 2, lines 39-45). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to use different types of sensors in different types of environments in order to provide a more efficient and effective device. All of the sensors claimed by the applicant are/were well known in the art.

Regarding **claim 19**, Adelman discloses that the device is capable of being located in an HVAC duct (column 2, lines 22-26).

As for **claim 13**, it has been noted above that Adelman discloses an adjustable low airflow threshold. It would have been obvious to one of ordinary skill in the art that the threshold could be adjusted to any desired level, even to a level substantially equal to the ambient airflow.

6. Claims 3, 14-15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adelman et al in view of Thompson as applied to the claims above, and further in view of Wong [U.S. Patent No 6,107,925].

As for **claims 3, 14, and 20**, Adelman nor Thompson disclose a device that includes a second condition sensor. Wong discloses a device that includes two condition sensors that cause an alarm when a condition is detected (column 8, lines 30 – 47). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to combine the system of Wong, which uses two condition sensors, with the devices of Adelman and Thompson because the combination would result in a device for detecting an ambient condition that could sense more than one ambient condition as well as the airflow level through the device. This type of system would be more effective in determining an emergency condition such as fire.

As for **claim 15**, Adelman teaches a device that is capable of being placed in an HVAC duct (column 2, lines 2-26).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adelman et al in view of Thompson as applied to the claims above, and further in view of Armbruster [U.S. Patent No 5,217,513].

As for **claim 9**, neither Adelman nor Thompson disclose an air filter comprising a polyfoam portion configured to prevent passage of visible particulate matter and a screen portion configured to prevent passage of microscopic matter.

In an analogous art, Armbruster discloses an air filter assembly, which includes a polyfoam filter and screen for filtering an air passageway (column 3, lines 15-30). While Armbruster does not specifically disclose what types of matter each filter is designed to prevent from passing. It is obviously a matter of design.

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to modify the air flow monitoring device taught by Adelman and Thompson to include the polyfoam filter and screen taught by Armbruster because the combination would result in a device that would effectively prevent the passage of visible and microscopic matter.

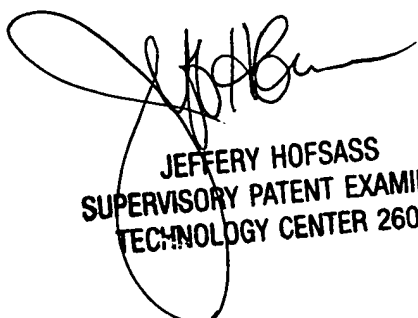
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M. Blount whose telephone number is (571) 272-2973. The examiner can normally be reached on 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric M. Blount
Examiner
Art Unit 2636



JEFFERY HOFSSASS
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